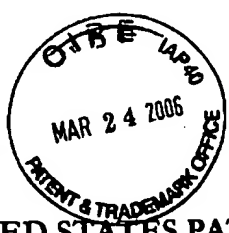United States Patent and Trademark Office
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01 FC:1253   1020.00 CR

DEP2REF

Docket No.: P-0185

MAR 24 2006

PATENT MAINTENANCE DIVISION

PATENT

2006 MAR 27

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

US PATENT & TRADEMARK

In re Application of	Confirmation No.: 3262
Bo Kyung KIM	Group Art Unit: **2666**
Serial No.: **09/801,682**	Examiner: **Shick C. HOM**
Filed: **March 9, 2001**	Customer No.: **34610**

For: **APPARATUS AND METHOD FOR RE-TRANSMITTING ERRONEOUS PACKET DATA**

REQUEST FOR REFUND

U.S. Patent and Trademark Office
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, Virginia 22314

Sir:

Attached hereto is a copy of the March 2006 Monthly Statement of Deposit Account (160607) showing a charge of **$1,020.00** related to the above-referenced application. This charge is marked with Fee Code **1253**, which is the Patent Office Fee for **Three Month Extension of Time**. However, no such extension was ever requested by the undersigned. Please see the attached Post Card dated stamped **January 5, 2005**, along with the Amendment in response to Office Action dated October 5, 2004, timely filed on the same date in connection with this application, and no extension fee is due.

The Request is filed within one year of the filing of the paper to which the incorrect

charge to the Deposit Account occurred. Accordingly, it is respectfully requested that this

charge be re-credited to Deposit Account No. 16-0607 and that the Patent Office acknowledge

this credit in writing to the undersigned.

Respectfully submitted,
FLESHNER & KIM, LLP

Daniel Y.J. Kim
Registration No. 36,186

Attachments: March 2006 Deposit Account Statement
Date-Stamped Post Card of January 5, 2005
Amendment Transmittal and Amendment
Filed January 5, 2005

P. O. Box 221200
Chantilly, VA 20153-1200
703 766-3701 DYK/dak
Date: **March 24, 2006**
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**United States
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Deposit Account Statement

Requested Statement Month:	March 2006
Deposit Account Number:	160607
Name:	FLESHNER & KIM
Attention:	
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City:	CHANTILLY
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03/22	82	PCT/US06/09298	GTI-0013PCT	1602	$700.00	$4,421.00
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The Patent Office acknowledges, and has stamped hereon, the date of receipt of the items listed below:

Docket No.:   P-0185

Application No.   09/801,682

Title: APPARATUS AND METHOD FOR RE-TRANSMITTING ERRONEOUS PACKET DATA

Inventor(s):   .   Bo Kyung KIM

FEE(S)   CHECK NO.

1.   Amendment Transmittal
2.   Amendment

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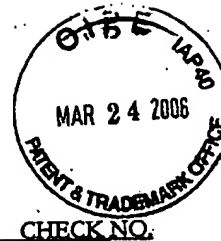
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TOTAL FEE: $

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(   ) Charge To Deposit Account 16-0607   Date Filed: January 5, 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	Confirmation No.: 3267
Bo Kyung KIM	Group Art Unit: 2666
Serial No: 09/801,682	Examiner: Shick C. HOM
Filed: March 9, 2001	Customer No.: 34610

(stamp: MAR 24 2006 PATENT & TRADEMARK OFFICE)

For: APPARATUS AND METHOD FOR RE-TRANSMITTING ERRONEOUS PACKET DATA

U.S. Patent and Trademark Office
220 20th Street S
Customer Window, Mail Stop Amendment
Crystal Plaza Two, Lobby, Room 1B03
Arlington, VA 22202

Dear Sir:
Transmitted herewith is an Amendment and/or Reply in the above identified application.
☒   No additional fee is required.
☐   Also attached:

The fee has been calculated as shown below:

	NO. OF CLAIMS	HIGHEST PREVIOUSLY PAID FOR	EXTRA CLAIMS	RATE	FEE
Total Claims	23	24	0	x $50.00 =	$0.00
Independent Claims	3	3	0	x $200.00=	$0.00
		If multiple claims newly presented, add $360.00			
		Fee for extension of time			
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☐   Please charge my Deposit Account No. 16-0607 in the amount of $_____. An additional copy of this transmittal sheet is submitted herewith.

☐   A check in the amount of $_____ (Check #_____) is attached.

☒   The Commissioner is hereby authorized to charge payment of any fees associated with this communication or credit any overpayment, to Deposit Account No. 16-0607, including any filing fees under 37 C.F.R. 1.16 for presentation of extra claims and any patent application processing fees under 37 C.F.R. 1.17.

Respectfully submitted,
FLESHNER & KIM, LLP

(signature)

Daniel Y.J. Kim
Registration No. 36,186
David A. Bilodeau
Registration No. 42,325

P.O. Box 221200
Chantilly, VA 20153-1200
(703) 766-3701 DYK/DAB:cre
Date: January 5, 2005

MAR 2 4 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Confirmation No.: 3267
Bo Kyung KIM	Group Art Unit 2666
Serial No.: 09/801,682	Examiner:. Shick C. HOM
Filed: March 9, 2001	**Customer No.: 34610**

For: APPARATUS AND METHOD FOR RE-TRANSMITTING ERRONEOUS PACKET DATA

AMENDMENT

U.S. Patent and Trademark Office
220 20th Street S.
Customer Window, Mail Stop Amendment
Crystal Plaza Two, Lobby, Room 1B03
Arlington, VA 22202

Sir:

In response to the Office Action of October 5, 2004, please amend the above-

identified application as follows:

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on
page 3 of this paper.

Remarks/Arguments begin on page 9 of this paper.

Amendments to the Specification:

Please replace paragraph [35] with the following amended paragraph:

[35] The functions and operations of respective layers illustrated in Figure 2 are the same as those of the related art case illustrated in Figure 1. In accordance with the present invention, however, the re-transmission of erroneous data is carried out by physical layers 30 and 35, rather than the transport layers 10 and 20-15 or data link layers 20 and 25. As shown in Figure 3, the physical layer 30-140 preferably includes a controller 110, a buffer 120, a timer 130, and a radio frequency unit 150. Likewise, the physical layer 145 includes a controller 115, a buffer 125, a timer 135, and a radio frequency unit 155.

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended) An apparatus for re-transmitting erroneous packet data in a communication system, comprising:

a buffer coupled to store transmitted data;

a controller configured to control the buffer to allow a data re-transmission function to be carried out; and

a radio frequency unit configured to transmit the data to a receiving apparatus,

wherein the buffer, the controller, and the radio frequency unit operate in a physical layer, and

wherein the data re-transmission function re-transmits the transmitted data stored in the buffer directly from the physical layer to a corresponding physical layer of the receiving apparatus without receiving a copy of the transmitted data from another layer above the physical layer.

2.   (Canceled).

3.   (Original) The apparatus of claim 1, wherein the buffer is adapted to store a

final data frame.

4.   (Original) The apparatus of claim 1, wherein the controller is adapted to

transmit only data that has been previously transmitted with errors.

5.   (Original) The apparatus of claim 1, wherein the communication system is a

wireless local loop.

6.   (Original) The apparatus of claim 1, wherein the data is re-transmitted from

the buffer after a prescribed period of time if no acknowledgment of the transmitted data has

been received.

7.   (Original) The apparatus of claim 6, wherein the transmitted data stored in the

buffer is stored as a final date frame in a physical layer.

8.   (Original) The apparatus of claim 6, wherein the data is re-transmitted from

the buffer before the expiration of the prescribed period of time if a negative

acknowledgment is received.

9.   (Original) The apparatus of claim 1, further comprising a timer configured to

initiate a countdown when the data is transmitted, wherein the countdown of the timer is

stopped and reset if an acknowledgment of the transmitted data is received before the timer

expires.

10.   (Original) The apparatus of claim 1, wherein the transmitted data stored in the

buffer is re-transmitted from the buffer if a negative acknowledgment is received.

11.   (Currently Amended) The apparatus of claim 10, wherein the ~~transmission~~

transmitted data stored in the buffer is stored as a final data frame in a physical layer.

12.   (Currently Amended) A method for re-transmitting erroneous packet data,

comprising:

        (a) transmitting data while storing the data in a buffer on a physical layer; and

        (b) re-transmitting the data stored in the buffer if no acknowledgment signal is

received within a prescribed period of time or if a negative acknowledgment signal is

received,

        wherein step (b) comprises:

re-transmitting the data stored in the buffer directly from the physical layer to a physical layer of a corresponding receiving apparatus without re-receiving the transmitted data from an upper layer.

13.   (Original) The method of claim 12, wherein step (b) comprises:

terminating the re-transmission procedure if an acknowledgment signal is received; and

repeatedly checking whether or not the acknowledgment signal is received, until the prescribed period of time elapses if no acknowledgment signal is received.

14.   (Original) The method of claim 12, wherein step (b) is repeatedly carried out until the acknowledgment signal is received.

15.   (Original) The method of claim 14, wherein a timer tracks the prescribed period of time and is reset when the data is re-transmitted or when an acknowledgment is received.

16.   (Original) The method of claim 12, wherein the buffer is adapted to store a final data frame.

17.   (Original) The method of claim 16, wherein the re-transmission of the final data frame from the buffer occurs on the physical layer.

18.   (Original) The method of claim 12, wherein the data re-transmission is made only for data involving errors.

19.   (Original) The method of claim 12, wherein the data is transmitted in a wireless local loop.

20.   (Currently Amended) A method of re-transmitting data in a communication system, comprising:

transmitting data from a transmitting terminal on a physical layer, said data being originally received from a layer above the physical layer;

storing the transmitted data in a physical layer buffer of the transmitting terminal; and

re-transmitting the stored data from the buffer if the transmission is faulty,

wherein re-transmitting the stored data re-transmits the stored data directly from the physical layer to a physical layer of a receiving apparatus without re-receiving the data from another layer above the physical layer.

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21.   (Original) The method of claim 20, wherein the transmitted data is stored as

final data frame.

22.   (Original) The method of claim 20, wherein the stored data is re-transmitted if

receipt of the data is not acknowledged within a prescribed period of time.

23.   (Original) The method of claim 22, wherein the stored data is re-transmitted if

a negative acknowledgment is received during the prescribed period of time.

24.   (Original) The method of claim 20, wherein the communication system is a

wireless local loop.

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1 and 3-24 are pending in the present application. Claim 2 has been canceled and claims 1, 11, 12 and 20 have been amended by the present amendment.

In the outstanding Office Action, claim 11 was rejected under 35 U.S.C. § 112, second paragraph; claims 1, 3-5 and 10 were rejected under 35 U.S.C. § 102(e) as anticipated by Weerackody et al.; claims 2, 11, 12, 16-21 and 24 were rejected under 35 U.S.C. § 103(a) as unpatentable over Weerackody et al. in view of Sourani; claims 6, 8 and 9 were rejected under 35 U.S.C. § 103(a) as unpatentable over Weerackody et al. in view of Hardy, III; and claims 7, 13-15, 22 and 23 were rejected under 35 U.S.C. § 103(a) as unpatentable over Weerackody et al. in view of Sourani and Hardy, III.

Claim 11 has been amended in light of the comments noted in the Office Action. Accordingly, it is respectfully requested the rejection of this claim under 35 U.S.C. § 112, second paragraph, be withdrawn.

Further, the rejection of claims 1, 3-5 and 10 is moot as claim 1 has been amended to include the subject matter recited in dependent claim 2.

Claims 2, 11, 12, 16-21 and 24 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Weerackody et al. in view of Sourani. This rejection is respectfully traversed.

As discussed above, independent claim 1 has been amended to include the subject matter recited in dependent claim 2. Claim 1 has also been amended to recite that the data re-transmission function re-transmits the transmitted data stored in the buffer directly from the physical layer to a corresponding physical layer of a receiving apparatus without receiving a copy of the transmitted data from another layer above the physical layer. Independent claims 12 and 20 include similar features in a varying scope.

In a non-limiting example, Figure 2 illustrates re-transmission of the data being performed between the physical layer 30 of the base station and the physical layer 35 of the terminal in which the layer 10 and layer 20 above the physical layer 30 of the base station does not resend a copy of the transmitted data to the physical layer 30. That is, as shown in Figure 2, the re-transmission of the data is performed directly between the physical layers 30 and 35, rather than using the transport layers 10 and 15 or data link layers 20 and 25 as in the related art case shown in Figure 1 (see paragraph [35]) at page 9, for example).

The Office Action applies Weerackody et al. as disclosing a general re-transmission scheme and indicates Sourani teaches a buffer, controller, transmitting terminal and radio frequency unit operating in a physical layer.

However, it is respectfully noted Sourani is merely directed to transmitting an urgent package before a non-urgent package. That is, in Sourani, the interrupt handler 36 (see Figure 1, for example) is used to interrupt the transmission of data from an input buffer 24

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when there is data in the urgent input buffer 25 (see also, column 1, lines 60-67). As shown

in Figure 1, the low layer unit 32 is above the physical/modem layer 34 and any data that is

transmitted in Sourani is received from layers above the physical layer as in the general

related art. The same is true for Weerackody et al. That is, Weerackody et al. is similar to the

related art discussed in the present invention in which data is retransmitted after it has been

re-received from layers 2 or 4 above the physical layer (see Figure 1, for example).

Accordingly, it is respectfully submitted independent claims 1, 12 and 20 and each of

the claims depending therefrom patentably define over the combination of Weerackody et al.

and Sourani.

Further, it is respectfully submitted the other rejections noted in the Office Action

have also been overcome as the claims rejected therein are dependent claims and Hardy, III

also does not teach or suggest the newly amended features nor the combinations of the

elements recited in the independent claims.

Further, the specification has been amended to correct minor informalities. It is

believed no new matter has been added.
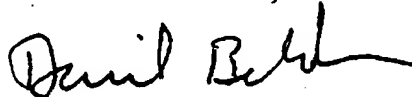
CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that this application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP

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Date: January 5, 2005

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